

## ABSTRACT OF THE DISCLOSURE

A transmitter compensates for the non-linearities within a transmission chain. The transmitter includes, for instance, a first forming device for forming, on the basis of at least one set of signal properties, at least one state expansion vector comprising quantities characterizing a signal. The transmitter includes a modifier for modifying the signal characterizing quantities of at least one state expansion vector with the at least one time-domain compensation parameter vector and with the at least one frequency-domain compensation parameter vector to form a pre-distorted signal. The transmitter includes a second forming device for forming a feedback signal from an output signal of a transmission chain. The transmitter includes an adapter for adapting at least one time-domain compensation parameter vector for adapting at least one frequency-domain compensation parameter vector based on a residual error between a transmit signal and the feedback signal.